



Raising A Mathematician Foundation™

Regn. No. E/8816 Thane Region
Registered under
Bombay Trust Act, 1950

First National-level All Girls Math Nurture Camp for Middle & High School Students

Introduction

In 1940, the world record for running a distance of 1 mile was set to 4:01 minutes. Scientists and doctors believed that it was not just dangerous but impossible to beat that record by any human being. Until 14 years later, in 1954, a medical student Roger Bannister proved everyone wrong by breaking the record in 3:59 minutes. This was a shocking piece of breaking the record. Amongst all the other records the reason that this one is different is because it was broken by another athlete, Landy, not 14 years later but just 46 days after Roger had made the record! Why is the record of Roger Bannister so important amongst all the other world records? It is important because he broke the mental barrier that was strongly ingrained in people's minds that a mile cannot be run in less than 4 minutes. Once this myth was busted, many athletes after Landy kept breaking records of 1 mile run. Many times, it is just a myth that needs to be broken, and sometimes it is a role model you need to follow.

Today, many believe that boys are better than girls in mathematics. To add to this notion, there are very few role models of women in science for girls to follow. If we look at some facts, we see that:

- Only 10-15% of Indian researchers and faculty members in premier institutions like the IIT's are women and only about 10% of the Bhatnagar prize recipients are women.
- Regrettably, the worldwide percentage of women in science research is less than 30% and the numbers in India are even less encouraging.
- Even when we look at the international teams for mathematics Olympiads, over 85% of the countries have no girl participant. The situation is no different in India.

As India aspires to be the '*Vishwaguru*', contribution from women especially in the fields of science and mathematics is critical for India. There is a common misconception that boys are better than girls in mathematics. To add to this notion, there are very few role models of women in science to inspire young minds. It is high time that we start programs in mathematics to uplift, encourage and inspire girls to also become pioneers that many others can look up to in the years to come.

Why mathematics?

Mathematics helps in logical thinking and improves the reasoning-ability of a student. Mathematics is not only essential for scientists or engineers, but it helps develop skills such as analyzing data, seeking evidence and recognizing patterns which in turn aids in understanding or interpreting information. Mathematics enables students to deploy different strategies to tackle a problem and identify the best possible solution. Globally, talented students are groomed by providing necessary guidance and direction to excel in various fields of interests. In academics, Mathematics offers a pivotal foundation to excel in many areas they may later choose to explore.

About the organisation and the camp

For the past 8 years, *Raising A Mathematician Foundation* (RAM Foundation) has been successfully running *Raising A Mathematician Training Program* (RAM TP). Leveraging on the successful model, we are proud to introduce our unique National Level 'All Girls Math Nurture Camp' (AG MNC) offered free of



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cost to provide holistic and complete guidance to talented young girls in Mathematics aged between 12 and 15 years. Our program will provide 7-day online nurture camp for 100 middle and high school girls across the country who will be shortlisted through a selection process. The entrance test will contain 20 questions which need to be attempted in a span of 2 hours.

What's more, this camp works independent of the conventional grading system and hence encourages students to take intellectual risks. The camp stresses on questioning and looking at the evidence for several mathematical concepts so as to understand the thought process behind its origin. Cultivating thinking skills in students, aid in developing research and exploratory mindset. The program also highlights the applications of math concepts in real-life situations. We believe in an interdisciplinary approach and do not compartmentalize mathematics into Algebra, Geometry or Arithmetic. Developing this integrative approach is an important step towards applying math skills in areas outside mathematics.

Highlights of the nurture camp

- Conceptual understanding of secondary/higher secondary level mathematics along with reasoning.
- Proving theorems so as to understand the thought process behind the same.
- Learning mathematical concepts beyond the curriculum and its application in daily life.
- Group discussions on various mathematical topics to improve communication skills.
- Creating a pool of like-minded students who can share their knowledge base, encourage, inspire and motivate each other.
- Guest lectures by eminent professors and industry experts who are actively involved in research and practice of mathematics in both pure or applied areas.

Outcome from the nurture camp

At the end of the program, students will be able to understand higher secondary level mathematics and correlate numerous topics, thereby getting a holistic view of the subject. The student will be able to appreciate the application of mathematical concepts in allied areas and hence understand those subjects better. After the camp, they will be further nurtured for 3 months and the best among them will be selected for RAM TP where they will get an opportunity to learn and interact with expert faculties from India and abroad. These selected students will continue to be supported by different programs within RAM Foundation in the upcoming months.

Broad concepts covered under the nurture camp

Number Theory, Geometry, Proofs, Indeterminate Equations, Combinatorics, Sequences and Series, Indeterminate Equations, History of Indian Mathematics and Mathematicians, Graph Theory.

Duration and Fees

7 days free of cost nurturing camp

